# THE OPTICAL MAGIC LANTERN JOURNAL AND PHOTOGRAPHIC ENLARGER.

EDITED BY J. HAY TAYLOR.

Vol. 2.—No. 27. [Entered at Stationers' Hall.] AUGUST 1, 1891. Price One Penny.

## CONTENTS.

PAGE.
Notes... ... ... ... ... ... 133
Inside a Regulator—No. 3 ... 134
Hand-Cameras for Obtaining Slides for the Lantern—No. 15 ... ... ... ... ... 134
How I became a Lanternist—VI. .. .. .. .. .. 135
The Lucigraph — A New Marine Signal ... ... ... 136
Colouring Lantern Slides—No. 2 ... ... ... ... ... 136
PAGE
The Good Templar Van and Lantern... ... ... ... ... 138
On Colouring Dry Plate Lantern Slides with Aniline Colours ... ... ... ... ... 138
Editorial Table ... ... ... 139
Society Meetings ... ... ... 139
Correspondence ... ... ... 140
Notes and Queries. ... ... 140

### CONTENTS OF No. 26.

Notes—Inside a Regulator—Hand-Cameras for Obtaining Slides for the Lantern (No. 14)—My Experience with the Oxygen-Ether Light and Scott's Benzoline Saturator—A Mixing Jet—Oxygen for Bottle and Hydrogen (House Gas) from the main—How I became a Lanternist (V.)—An Illuminated Fountain, and how to make it—Colouring Lantern Slides (No. 1)—Useful Hints for Operators—Editorial Table—Correspondence (Ether-Oxygen Light in Africa—Ether Saturators—Holiday Homes—Excess of Ether: A Cause of Pops with a Saturator)—Notes and Queries.

## Notices.

THE *Optical Magic Lantern Journal and Photographic Enlarger* is issued on the 1st of every month, price One Penny, and may be obtained from all Newsvendors, Railway News Stalls, Photographic Dealers, or from the Publishers, at the following rates, post free :—

| | | Continental. | United States. |
|---|---|---|---|
| 12 months | 1/6 | 2/- | 60 cents. |
| Single copies... | -/1½ | -/2 | 6 „ |

Advertisements (Scale of Charges), displayed :—

| | £ | s. | d. |
|---|---|---|---|
| Front and back pages, by arrangement. | | | |
| Ordinary page, facing matter (whole) ... | 3 | 0 | 0 |
| „ „ ... ... (half) ... | 1 | 15 | 0 |
| „ „ ... ... (quarter)... | 1 | 0 | 0 |
| „ „ ... ... (eighth) ... | | 10 | 0 |
| „ „ per 1 inch in column ... | | 6 | 0 |
| „ „ „ ½ „ „ ... | | 3 | 0 |

Special quotations for a series.

Exchange Column, General Wants, &c. (not Trade)—

First 20 words, 6d.; and for every 3 additional words, 1d.

Advertisements must reach the office not later than the 24th of each month. All cheques and postal orders to be made payable to Taylor Brothers.

Editorial communications must be addressed, The Editor; advertisements and business communications to Taylor Brothers, care of the Publishers, Dorset Works, Salisbury Square, Fleet Street, London, E.C.

American Agents:—The International News Co., 83 and 85, Duane Street, New York City.

## Notes.

"THE Great Light Entertainment" is the latest American name for a popular lantern show.

* * *

FROM the 6th to the 11th ult., the Temperance Van Mission held a Bazaar in the Holborn Town Hall, in order to obtain funds for building more magic lantern vans. The result was very satisfactory, and two more vans will be sent out shortly. On another page we give an illustration of the style of caravan used by this Temperance Society.

* * *

THE International Photographic Exhibition, Leeds, will be open from Dec. 7, 1891, to Jan. 9, 1892.

* * *

MESSRS. MAWSON AND SWAN supply (free) a neat exposure note-book, divided off for the following particulars :—No. of slide, hour, stop, exposure, light, and subject.

* * *

THE Fifty-ninth Annual Exhibition of the Royal Cornwall Polytechnic Society will be held at Falmouth, on the 25th inst. All work sent for competition in the Photographic Department must have been executed within the last eighteen months.

* * *

THE Band of Hope Union possesses five sets of dissolving view lanterns; these when not engaged are employed for giving free entertainments in workhouses and schools.

* * *

COLONEL DRYENFORTH has started for Texas, where he intends making experiments as to the feasibility of producing rain in arid regions by exploding balloons, charged with oxygen and hydrogen, at a considerable height in the air. Tests will also be made in exploding dynamite attached to the tails of huge kites, in connection with the theory that rain may be produced by concussion caused by powerful explosives in mid-air. The dynamite will be exploded in the same manner as the balloons—namely, by a slender wire leading to the kites and connected with an electric battery worked on the ground.

* * *

THE Polish Professor, Dr. Olszewski, gave a lecture a few weeks ago before the sixth congress of Polish naturalists, at Cracow, on a new method of liquefying oxygen. He produced surprise by making 200 grammes of liquid oxygen before his audience.

* * *

EVERYTHING at the Bath Photographic Convention was a success except the lantern entertainment on the opening evening. The woodwork of the instrument ended in flames.

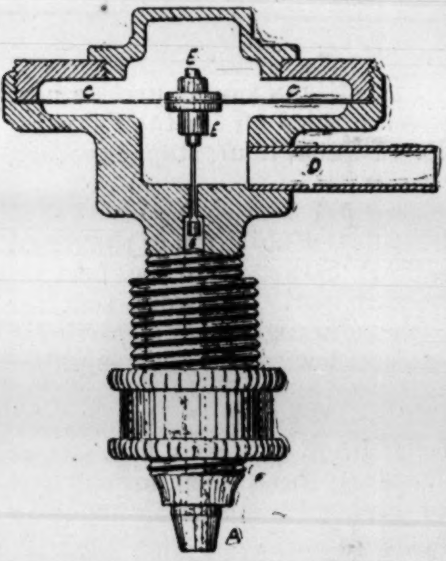
—:o:—

## Inside a Regulator.

### No. 3.

THE "RELIABLE."—This regulator which has been patented by Mr. Suiter, is perhaps, the latest form which has been introduced to the public. It is small in size, and has few working parts.

The valve for controlling the flow of gas from the bottle opens inwards (see cut), and is fastened direct on to a diaphragm which is simply a thin disc of metal.



The regulator is connected to the bottle by the cone A, which is made of steel burnished, so that it is not liable to get indented, and so cause an imperfect joint. Various shaped connecting pieces are made interchangeable, so that the regulator may be attached to any particular make of bottle. The controlling action is as follows: When gas under pressure is admitted at A, it passes the valve B, which in its normal state stands open, to the underside of the metal disc or diaphragm C. The outlet D being closed by rubber tubing and stop-cock, the internal pressure causes C to bulge upwards, this causes the valve B to close and become firmly seated, thus preventing the ingress of more gas from the bottle until such time as a portion is drawn off at the outlet D, when the pressure falling, the diaphragm springs back, and the valve B opens, thus allowing more gas to pass. In this manner the action is continued until the supply of gas is exhausted.

The pressure of the gas given off is regulated by adjusting the distance of the valve from its seat by the clamping nuts EE, on either side of the diaphragm, so that the disc has to spring more or less before closing the valve.

As we had not seen one of these regulators in action, we submitted it to the following tests: It was coupled to a bottle containing house gas under pressure, and the outlet connected to a branch furnished with three ordinary household burners. The gas was lighted at the one burner, and little or no difference was made when the taps at the other burners were suddenly turned off and on. This was continued at intervals until the bottle was about empty, and still little or no difference was made in the flame.

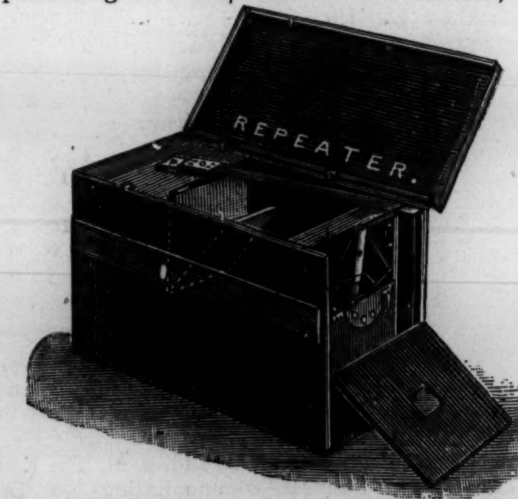
—:o:—

## Hand-Cameras for Obtaining Slides for the Lantern.

| | | | | | |
|---|---|---|---|---|---|
| | "Facile"... ... | (Fallowfield) ... ... ... | see | March | 1st, 1890. |
| No. 1 | "Giah" ... ... | (Mawson & Swan) ... ... | ,, | May | 1st, ,, |
| ,, 2 | "Quadrant" ... | (W. H. Humphries & Co.) | ,, | June | 1st, ,, |
| ,, 3 | "Eclipse ... | (J. F. Shew & Co.)... ... | ,, | July | 1st, ,, |
| ,, 4 | "Eureka" ... | (W. W. Rouch & Co.) ... | ,, | Aug. | 1st, ,, |
| ,, 5 | "Key" ... ... | (Platinotype Co.) ... ... | ,, | Sept. | 1st, ,, |
| ,, 6 | "Optimus" ... | (Perken, Son & Rayment) | ,, | Oct. | 1st, ,, |
| ,, 7 | "The Griffin" | (Griffin & Sons, Limited) | ,, | Nov. | 1st, ,, |
| ,, 8 | "The Swinden-Earp" Patent | ... ... | ,, | Dec. | 1st, ,, |
| ,, 9 | "Collins" | (C. G. Collins) ... | ,, | Feb. | 1st, 1891. |
| ,, 10 | "Kodak" ... | (Eastman Co.) ... . | ,, | Mar. | 1st, ,, |
| ,, 11 | "Guinea" ... | (Walter Griffith) ... ... | ,, | April | 1st, ,, |
| ,, 12 | "Vanneck" ... | (Watson & Sons).. ... | ,, | May | 1st, ,, |
| ,, 13 | "Chadwicks" | (W. I. Chadwick) ... | ,, | June | 1st, ,, |
| ,, 14 | "Bonanza" .. | (R. & A. J. Mercer) .. | ,, | July | 1st, ,, |

### No. 15.—"REPEATER."

MR. CUSWORTH, of Hainault Road, Leytonstone, has, in perfecting his "Repeater" Hand-Camera, worked out a very efficient action for changing the plates, whilst the same motion causes the shutter to become set.



The plates (twelve) are secured to their wooden carriers by an elastic band spring over each end. The plates thus fitted with the carriers are set one behind the other in the end of the camera (see cut), and are kept firmly up to the front of this reservoir by a spiral spring placed behind. The front carrier is held in position by catches, which are attached to the lever shown at the top of the figure. At one side of the catch a small piece of the wooden carrier is cut away, so that if the catch were removed to one side it would no longer retain the plate and carrier, but would allow it to pass, when it would at once fall face down in a reservoir at bottom of camera ; and each time the lever is thus actuated a plate is liberated. The movement is very similar to the escapement of a clock, but in this case the lever takes the part of the pendulum. Whilst the lever changes the plate, it also sets the shutter for the next exposure, by altering the position of the tension on same. A slight touch on a pin at side of camera suffices to liberate the shutter and make the exposure. The lens, which is set at fixed focus, is provided with rotating stops. At the side of the camera is a small opening, at which a different number is shown as each plate is changed. As it is only necessary to push the lever from one side to the other, in order to change a plate, several plates can, if necessary, be exposed in a surprisingly short time.

The camera is nicely finished in ebonized wood, and weighs, when charged, about 3¾lb.

—:o:—

## How I Became a Lanternist.—VI.

By the Vice-President of the Lantern Society.

*(Continued from page 128.)*

In my last I spoke about the divided lantern, and now wish to add a word or two. Whilst I have a mahogany box that takes both halves, or in other words the lantern complete, I have a smaller box for one with a handle at the top for ready portable lifting and carrying ; but still it is a big thing, a great deal too large. In fact, as I maintain, most lanterns are needlessly so ; as I have said, if I were to have a new lantern built, the following are the points I should attend to :—Greater lightness with reduction in size, lightening the box and all appliances, as I believe with such results quite as satisfactory and effective might be obtained. The lantern outfit is a most difficult and expensive thing to get from one place to another. Now why, may I ask, cannot we make things more agreeable all round, by lessening the weight and size, and by going in for greater simplicity in many details?

Another thing : I have always found considerable difficulty in getting, in London at least, one's apparatus from one place to another. It is expensive, it is risky, and anxious work to send them by the ordinary carrying companies. Supposing a man uses his own gas apparatus and gives his own time, and employs horse vehicles for transit, it means in many cases double expense. I think at least it should be understood, even amongst amateurs, that where expenses in these exhibitions are incurred they should be met by those for whom he exhibits. Of course, such a thing as a fee is out of the question and would make the man a professional at once. Yet I call to mind a great many exhibitions that have been given by a number of gentlemen of my acquaintance and not in one case out of a dozen are the expenses recouped. Whilst some of us may be able to afford this, there are many lanternists, and good men too, whose position in life is less fortunate and who cannot afford the expense thus incurred. As these words may possibly reach some of those to whom they apply, I hope a more considerate policy may in future prevail in matters they have to deal with.

Whilst dwelling on the matter of lightness and portability, I should like to say a word about sheets, which are very important things. The ordinary white calico sheet does very well, but it is not by any means perfect. The loss of light, owing to the texture and the porous nature thereof, is a very serious matter, unless mixed jets are used. Yet, if we were to go in for the sheet that is duly prepared on the principle of Tyler's new sheet, which is the best I have yet seen, not only is the weight greater, but the sheet itself must not be folded or creased, but must be rolled. This is a difficulty that cannot be got over where handiness is a first necessity, and yet a thing from 12ft. to 15ft. in length cannot well be carried on a cab; it is, in short, an impediment and a nuisance. There is, so far as I know, no means of getting over this difficulty at present. The ordinary cotton-sheet, which will roll or fold up and go into a bag with the folding or jointed screen and stand, has its defects, but on the whole perhaps is the best where portability is so essential. Take again the frame-work on which the average screen is hung : they are heavy, costly, and awkward to move about with. I have got on very well with a frame that splits up into ten parts, made of light wood and with light joints ; but such a frame can only be made to carry the ordinary white sheet. It is very light and handy, the whole thing weighing 10lb. to 15lb., including the case in which it folds, the size being 10ft. 6in. This holds a disc which is big enough for ordinary rooms.

Perhaps the time has come when most of our public schools and public halls should be fitted with a sheet permanently fixed, so as to lower and raise. In some of our great towns in the Midlands and in the North this has been done. A question of its disfiguring the end of a room, or having the cornice attached to walls, to which the trustees and others object, is a very small matter. Schoolrooms should be fitted (at least, in all cases where possible) with every facility for so popular, pleasant, and useful an apparatus as the optical lantern, which is fast becoming one of the teachers of our time.

I do not propose going into such matters as the details of fittings; these have been ably dealt with in "Editorial" and contributed articles in this Journal. Gas in cylinders is so readily procured, so clean, effective, and economical as to time and money, that it is a matter in which we are not likely to make any great improvement for a time. The best plan is to have two bottles. An ordinary 8ft. or 10ft. will usually give a couple of exhibitions with a blow-through jet. Supposing a bottle used on the last occasion may be half-filled, start it first, and let it go until empty, and attach another in case it should run short. Thus, while one is being used and is always ready for use, another can be sent away to be filled. One thus feels independent of that terrible possibility—gas running short.

*(To be continued.)*

# The Lucigraph—A New Marine Signal.

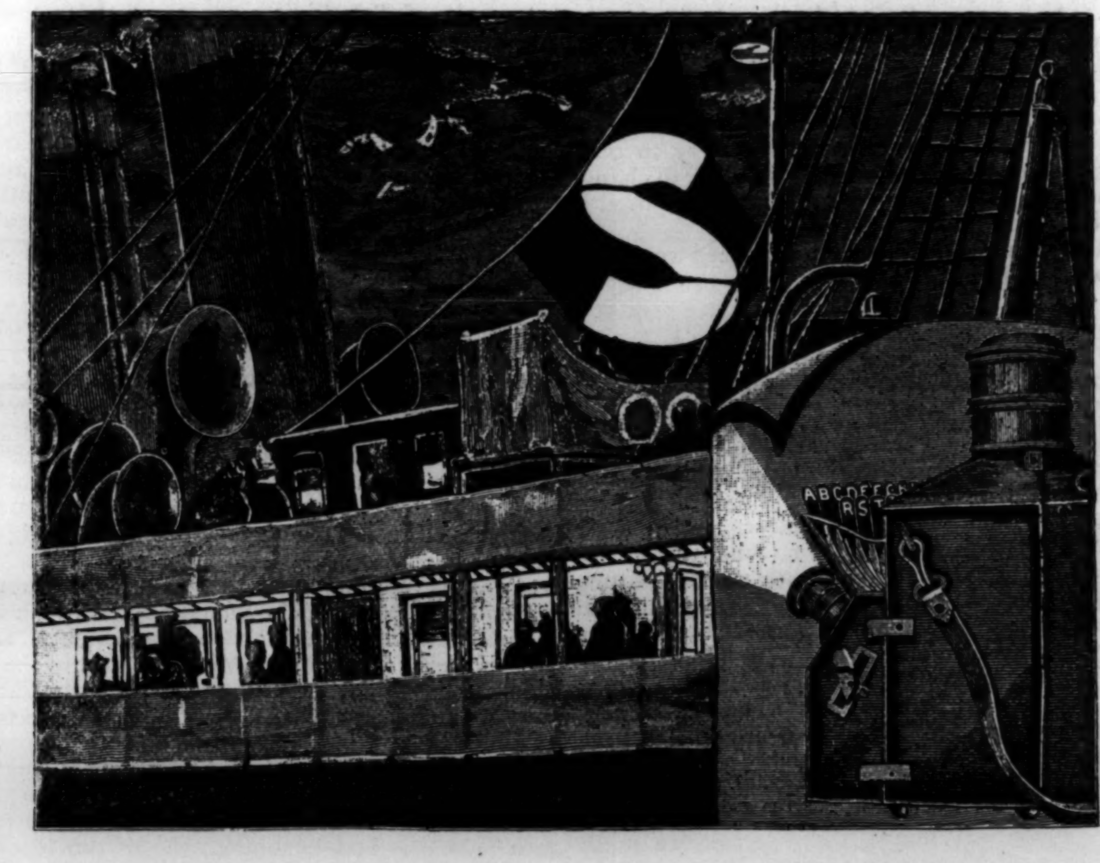
An instrument termed the Lucigraph, intended for marine signalling at night, has recently been patented in America and Europe. The *Scientific American*, in describing it, says it is adapted for use by the mercantile marine, by lighthouses, signal, coast-guard, telegraph and other stations, and for the use of lightships. It is constructed on the principle of the stereopticon or magic lantern, and is worked by keys similar to the type-writer, each key being attached to a metal plate stencilled in any desired character, such as a letter of the alphabet or numeral. Each key is painted with a character similar to that cut out of the plate to which it is attached, and when pressed, it projects the letter plate before the light, throwing the said character on a screen.

For ordinary use an Argand burner kerosene lamp is sufficiently strong, as it is estimated that every five-candle power gives a range of vision of about a quarter of a mile on a bright moonlight night. Of course, for higher and better service, the electric or lime-light should be used in the lantern.

The signals can be read by any one without instruction, and when code letters, like those of the universal international code, are used, it can be read by any one using the code book carried on all ships. It would be found useful on pilot boats for signalling their numbers as well as for speaking ships. It also signals by any flash code, and by exposing the bull's-eye lens and working a special mechanism it can be made to signal quite as fast and to a greater distance than most of the patent flash code lamps in use.

It has been exhaustively tested by practical men in all weathers, and has received much favourable comment.

The screen should be of white duck or of some bright colour. A house may be used, or anything giving a flat surface confronting the point to be signalled to, but the most efficient device is probably a diamond-shaped duck screen located on the bridge, which may be hoisted or lowered at pleasure, and held in place by stays, as shown in the cut, so that it can be turned at pleasure toward any point of the compass.



# Colouring Lantern Slides.—No. 2.

By A. W. Scott.

*(Continued from page 130.)*

*Madder Lake and Rose Madder.*—Madder lake or pink madder is very similar in tint to rose madder. They are beautiful colours, permanent and perfectly transparent, and give brighter reds on the screen than crimson lake. Being very weak in colouring power, they are useless for dabbing. It is necessary to pile on the paint with the brush before any approach to a deep red is obtained. Prepared in oil, they require weeks to dry, unless a drying oven is used; but in varnish they dry quicker, and are more intense. They are expensive colours, and are not much used on this account.

*Flesh.*—This is a perfectly transparent brownish red, sold in bottles by dealers in varnish colours. It is not a dye, but is of the nature of a varnish, and can be had either quick or slow drying.

*Gamboge.*—A bright yellow, giving excellent greens when combined with Prussian blue. It has little intensity, and if prepared in oil is very slow in drying. Gamboge varnish can, however, be obtained, which will dry as quickly as mastic varnish.

*Italian Pink.*—A bright yellow, more intense than gamboge, and therefore better for dabbing. Prepared in oil in the usual collapsible tubes, it is very slow in drying, many days being required, if not assisted by the application of heat. It is chiefly with weak colours, such as the yellows, that the advantage of varnish colours over oil paints becomes conspicuous.

*Yellow Lake.*—This is similar to Italian pink, but it has a slight brown tinge. It is moderately intense, and pale tints can be dabbed with it; it is rather slow in drying. The yellows are all perfectly transparent, but owing to the colour of artificial light being yellow or orange as compared with daylight, they usually appear very pale on the screen.

*Burnt Sienna.*—A rich orange brown, fairly intense, and well adapted for dabbing; it also dries well. There are different qualities of this pigment in the market, some being more transparent than others; but none are perfectly transparent, and hence the colour usually appears a little darker on the screen than on the slide. It is the most useful brown for the slide painter.

*Burnt Umber.*—This is a darker brown than burnt sienna, and is intense, dabbing easily, and drying quickly. It is not perfectly transparent, though there is little loss of richness in pale washes of the colour. It is chiefly in the deeper tints that this defect shows itself.

*Asphaltum.*—A perfectly transparent brown, not very intense. It is of the nature of a varnish, being made by dissolving asphaltum in oil or varnish. It is, however, not so useful as the two preceding colours.

*Caledonian Brown Mummy and Vandyke Brown* are other browns. Mummy is quite transparent, of a yellowish tint: Caledonian brown is fairly transparent; and Vandyke brown is rich in colour, but loses considerably in richness when shown on the screen, owing to want of transparency. Practically these three colours can be dispensed with.

*Mauve.*—This is a useful colour, as it gives us the brightest violets procurable. The tint may be modified by adding other colours, such as blues and pinks. It is sold in collapsible tubes, also in bottles as a varnish colour. It is quite transparent, and sufficiently intense for dabbing, and is useful in skies and cast shadows.

*Verdigris* is a rich green, fairly transparent, and very useful for grass, foliage, &c. The tint may be modified by the addition of yellow or burnt sienna. It is not suitable for dabbing.

*Ivory Black, Lamp Black, Blue Black* are all good intense pigments, capable of being dabbed, and of making excellent greys when diluted with varnish or megilp, and of producing sober tints when mixed with the bright colours. They dry quickly, especially when mixed with mastic varnish.

*Varnishes.*—Oil colours require the addition of some suitable medium or varnish, in order to render them transparent. For slide painting, a good varnish should be free from colour; when dry, the film should have a flat glassy surface, and be hard and tough, and not liable to soften much when heated. It should be of such a consistence that dabbing is possible, with or without the addition of colours; while it should also dry in a moderate time; and when dry, it should not soften if a subsequent layer of varnish is applied. Such a varnish, made by careful mixture of several ingredients, can be obtained from the writer under the name of Special Varnish; it dries hard in fifteen minutes with the aid of heat. The varnishes obtainable at the artists' dealers may also be employed, and a short description of their qualities may be useful.

*Mastic Varnish.*—This is one of the most colourless of varnishes, made by dissolving mastic gum in turpentine; the gum dissolves very slowly. When applied to glass with the brush, it soon sets and becomes too hard for dabbing; this may be cured by adding a little magilp. Mastic gum when heated becomes soft and almost liquid.

*Copal Varnish.*—This is not so colourless as mastic, but is cheaper, leaves a thicker film, and will do for comic slips and the like.

*Magilp.*—This is a transparent, jelly-like substance, sold in collapsible tubes and is said to be a mixture of mastic and drying oil. Magilp dries very slowly; but when it is dry it does not soften with heat, and is not liable to disturbance when subsequent work is applied. However, many days are required before magilp becomes thoroughly hard, but as with other varnishes, drying may be hastened by heat.

*Canada Balsam.*—A transparent cement, which may be thinned with turpentine, and used as a varnish. It is apt to leave a very sticky film, to which dust adheres, and it takes a long time to dry hard normally. When dry it will be found, on warming the glass, that the balsam becomes quite liquid again, hence its use requires judgment.

*Japanners' Gold Size.*—This has a strong brown colour, and is unsuitable for blues and purples. For other colours, however, it answers well; it leaves a bright surface, dries quickly, and after a few days, the film does not soften again by heat. Linseed, nut, and poppy oils are not of much use in slide-painting, as they dry too slowly, and do not impart the transparence and smooth bright surface desirable. Magilp is perhaps the best substitute when an oily medium is wanted to mix with a quick-drying varnish.

*Brushes.*—The "brown water-colour sables" are the best for colouring slides, either with varnish or with water-colours. The red sables are stiffer in the hairs. Two or three brushes will suffice; one may be half-an-inch long in the visible portion of the hairs; another may be a size smaller; and one "liner" brush—the hairs about an inch long for painting fine lines—will be useful. The brushes should be fitted on sticks about four inches long; an egg-cup containing turpentine will enable them to be readily cleaned after each tint is applied, the brush being first dipped in the fluid and then wiped on a cloth. The brush should always be put away clean, with the hairs drawn to a point. If the hairs should become divergent and crooked, they may be corrected by dipping them in hot water and then stroking the hairs straight with the fingers.

*The Palette* should be of white porcelain, as wood palettes are useless for transparent colours. A good substitute for a palette may be made by a piece of clear glass about half-plate size, with a half-sheet of white notepaper gummed at the corners of the under side.

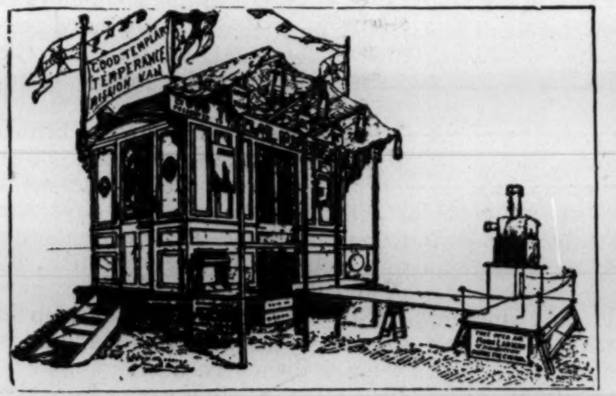
*The Easel.*—A small retouching desk makes a very good easel. The slide is held atan angle of about 45deg., and a sheet of white paper placed horizontally under the slide will enable the details to be clearly seen. Some artists, especially those who only paint slides occasionally, prefer to dispense with an easel and hold the slide in the fingers. If this plan is adopted, a box about six inches high may be placed on the table; a sheet of notepaper laid on the box, and the slide with its lower edge resting on this paper, may be held at a suitable angle by the left hand. Of course only the right hand is then at liberty for work, but the slide can be easily laid flat on the paper when cleaning brushes and the like, so that the method is handier than it might at first appear to be.

*(To be continued.)*

——:o:——

## The Good Templar Van and Lantern.

THE annexed reduced pen-and-ink sketch depicts the first Good Templar Mission Van, which was dedicated last year at their Crystal Palace Fête, and has since travelled through Kent, Hants, Isle of Wight, Surrey, Middlesex, Essex, Suffolk, Norfolk, Lincoln, and Yorkshire, and is now in Lancashire. Its attendant missionaries—Mr. and Mrs. Fisk, of London—give temperance addresses, and exhibit with their magic lantern in the open-air, when the evenings—with the aid of an awning to darken the sheet—are dark enough to show the series of "Buy Your Own Cherries," or the specially-made Good Templar and temperance series of photographic slides they possess.



GOOD TEMPLARS TEMPERANCE MISSION VAN.

The van is a veritable house on wheels, with collapsible harmonium, folding chairs, tables and bed, enamelled iron and "crockery-ware"; a winter coal-cooking stove, and a summer "Wanzer Cooker"; books and pamphlets for sale; diagrams to lecture with; hymn sheets for singing, and pledge-cards for signing. A long platform falls down from its side, with an extension gangway from it to a small lantern platform, from whence the pictures are projected on a sheet covering the side of the van. The van is used mainly for visiting villages where temperance teachings may not be popular; in spreading temperance teaching, and in organizing work.

During its first few months its missioners have secured one thousand adherents to the total abstinence pledge, and been the means of forming a score of Good Templar lodges, and other temperance organizations, on hitherto unoccupied, and sometimes hostile, ground.

The lantern is a feature which greatly takes among the villagers of all ages. The good work already done has occasioned a call for more vans similarly equipped, and to build these the Good Templars—who have over one hundred thousand juvenile and adult members in England alone—have just held a bazaar at Holborn Town Hall, where many M.P.'s and other dignitaries attended, and some £900 was received, while the goods remaining will realise several hundreds more in after-sales.

The lantern takes the usual 3¼in. slides, and any who may feel disposed to donate any temperance slides, they can be addressed to Good Templar Buildings, Edmund Street, Birmingham, where they will be gratefully acknowledged by Mr. Joseph Malins.

——:o:——

## On Colouring Dry-Plate Lantern Slides witn Aniline Colours.

BY ARTHUR LE BOUTILLIER.

NO one who has attended illustrated lectures or exhibitions of lantern slides can have failed to observe the pleasure with which well-coloured pictures are received by the audience. Not only do such make a break in the monotony of the plain slides, but, if true to nature, with the tints delicately and judiciously applied, they give a realism to the scene unobtainable in the plain photograph.

Makers of lantern slides are apt, when at work, to overlook the fact that the perfection of the picture depends on its appearance on the screen, and not on the beauty of the slide itself. Hence it is that so many wet-plate slides (nearly all, in fact) are too dense to look brilliant and transparent in the shadows when enlarged much more than to sixteen or eighteen feet, even with the very best of modern stereopticons. The idea that absolutely clear glass in sky and water is always necessary is passing away before the beautiful cloud effects and reflections so easily obtained in dry-plate slides, and, above all, colour can be so quickly and easily given to these effects that the glaring brush or finger-marked slides so common to-day will soon be as obsolete as the old oil-painted views of twenty years ago. If any reader of this little article will adopt the following few hints, aided by his own experience, success in obtaining beautiful coloured slides will be assured.

For this work the common aniline dye colours are used. Three brushes are necessary: one broad camel's-hair, about an inch in width, one medium-sized fine-pointed sable brush, and one quite small sable brush for very delicate tinting. Prepare a medium solution of gum arabic—that sold in bottles in any stationery store will do—and all is ready. The work must be done by daylight, in order to get the proper tones.

Make the dry-plate slide in the usual way, and to the density desired, using any of the developers, with care, however, that the plate is well cleared of hypo after fixing, and that no sediment from the water remains on the film.

The sky is coloured while the slide is still wet.

Place a few drops of blue colour from its bottle on a plate, and beside it a drop or so of the gum solution. Holding the slide in the left hand, with sky downward, take the largest brush from a glass of clear water, where it has been soaking for a few minutes, and without squeezing out much of the water from the hair, take up some of the colour and gum from the plate. The plate must be kept very wet during the tinting of the sky by dipping the brush constantly in the glass of water. Begin at the bottom of the slide (which is the top of the picture), and with rapid strokes of the brush, from side to side on the film, work up to near the horizon line, making the colour deeper and deeper by repeated applications, until satisfied with its intensity. If the colour should be too intense when finished, soaking or brushing with clear water will reduce it. In sunset effects, after the blue is finished, a very much diluted application of rose colour should be blended into the blue near the horizon, then next to that a slight trace of lemon-yellow, or whatever tint the artist desires; but throughout the whole work on the sky the plate must be kept wet, as the moment the film begins to get sticky and hardens, the brush will make streaks in it. The time required to tint the sky should not exceed five minutes.

While the plate is drying, but before it is quite so, is the best time to work in greens and the broader colours of the landscape. Mix lemon-yellow and blue, lemon-yellow and dark green, and orange and dark green, and any colour of foliage can be obtained by varying the proportions. The foliage which is against the sky must be tinted after the plate is dry with the small brush, or the colour will run into the blue. For rocks, stone buildings, &c., use a light tint of violet; for roadways, paths, &c., use browns, yellows, and violet; for sea-water, dark green and blue; for still water, reflect the sky as nearly as possible. Best of all, study nature and reproduce it.

These coloured slides may be mounted as usual with mat and cover glass. The colours are not affected by heat or cold, as they are incorporated in the film of the plate. It is best to keep from dust as much as possible when at work. If it settles on the sky while tinting, wash the whole thing under the tap. Don't try to pick it off or rub it off with the fingers or brush. Blue can be reduced in intensity by rinsing the plate, the other colours cannot; so be careful not to have sunsets too intense.

Better coloured slides can be made on dry-plates than those prepared by the wet process. In the words of Buchanan Read: "If you don't believe it, try it."—*The Photographic Times.*

——:o:——

Sometimes the objective (of a lantern) which is a combination does not produce a sufficiently flat field; this difficulty may be overcome by removing the thin metal ring which separates the back lens.—*T. A. Furnivel.*

## Editorial Table.

Coloured Slides.—We have received specimens of slides coloured by Mr. F. J. Stedman (address in advertisement on last page). These are brilliant, soft and pleasing. Mr. Stedman, when making transparencies on his own lantern plates, develops them of a tone to correspond with the colouring. Thus, in the case of a scene to represent moonlight, the image is produced with a violet or bluish tone. Mr. Stedman has lately entered the field, and fully understands the requirements of a coloured lantern transparency. We are informed that the qualities of each finished slide are tested in the lantern by limelight before leaving his studio.

Photography Annual, 2s. (Illife and Son). We only received our copy of this useful Annual about the same time that it was announced *out of print.* Those who have obtained copies will appreciate the valuable information afforded in the articles, descriptions of apparatus, and tables, which occupy several hundreds of pages. Some fine mechanical and other prints are also to be found in this Annual.

Fallowfield's Annual Catalogue (1s.) for 1891 is one-sixth larger than that for last year, occasioned chiefly by the greater assortment of apparatus stocked. Instructions are given for working various photographic processes. One hundred and fifty hints are also added. These are specially interesting.

——:o:——

## Society Meetings.

North Middlesex Photographic Society.—July 13, Mr. H. Smith in the chair. Objects of interest were passed round for inspection. The new patterns—Thornton Pickard and the "Automatique" time and instantaneous shutters were shown. Cameras were shown by Mr. Braine and Mr. Gill. An ingeniously devised printing frame, to be used in combination printing, or for making lantern slides by contact from selected portions of a larger negative, was shown by the president. The usual competition of views taken at the society's field days was then held. Mr. H. Smith received the vote of merit for views of Enfield and High Beech.

Liverpool Amateur Photographic Association.—The fifth ordinary meeting of the 28th session took place on June 25, in the association club rooms, 3, Lord-street, Mr. P. Lange in the chair. The balance-sheet of the Liverpool International Photographic Exhibition was brought up for discussion, and was, on the motion of Colonel Ellison, seconded by Mr. Glazebrook, unanimously passed and approved. The best thanks of the society were then tendered to Mr. T. S. Mayne, the Exhibition hon. secretary, by whose prolonged and arduous exertions the Exhibition was carried through. The society also asked Mr. Mayne to accept the sum of £50 as a mark of their appreciation of his efforts. The president showed some prints of sub-marine explosions taken by him recently outside the river Mersey, during the experiments of the submarine miners' division for the defences of the Port of Liverpool. The principal picture taken illustrates an explosion of the 100lb. gun-cotton charge, the column of water forced up rising to over 100ft.

Oxford Photo Society.—The new rooms of this Society at 136, High-street, Oxford, were opened on the 7th ult., and will remain open daily during each day and evening.

Holborn Camera Club.—On July 10, Mr. T. O. Dear (vice-president) in the chair, Mr. E. Clifton gave the mem bers a few hints on the "Method of Finishing the Negative." He had found that amateurs took a great deal more trouble in developing their negatives than professionals, but in fixing and washing they reduced the careful developing to *nil.* While the print was in the fixing bath they would look at it every now and again and admire; the air acting upon the silver caused the film to turn a sickly yellow, and the result was flat negatives. Speaking of the final washing, he said a negative not thoroughly washed was very liable to damp, to say nothing of fading and other kindred evils. He finished his excellent hints by some remarks on reducing and intensifying. An interesting discussion followed, chiefly on reducing and packing of exposed plates on a tour.

PHOTO SOCIETY OF GREAT BRITAIN.—The rooms of this Society, (50, Great Russell-street, W.C.), were closed on the 29th ult., and will be re-opened on the 25th inst.

SHEFFIELD PHOTO SOCIETY.—On July 7, Mr. B. J. Taylor in the chair, Mr. Hibbert brought for inspection G. Houghton and Son's Automatic hand camera, fitted with one of Wray's lenses. Mr. E. Beck gave a practical demonstration on platinotype printing, by the hot bath process, which was a great success, and fully appreciated by the members.

CROYDON MICROSCOPICAL AND NATURAL HISTORY CLUB.—Photographic Section.—An ordinary meeting was held on July 3, when a numerous assortment of negatives and prints were exhibited, taken by members during the recent excursions. The next ordinary meeting on August 7.

:o:

## Correspondence.

### EXHIBITION AT PALL MALL.

[*To the Editor.*]

SIR,—The Exhibition Committee of the Photographic Society of Great Britain desire me to inform you that the annual exhibition of that Society will be held at the Gallery of the Royal Society of Painters in Water Colours, 5a, Pall Mall East, from Monday, the 28th of September, until Thursday, the 12th of November next.

The exhibition will be opened daily (Sundays excepted) from ten a.m. to five p.m., and on Monday, Wednesday, Thursday, and Saturday evenings from seven p.m. to ten.

The following gentlemen have been appointed judges, and have consented to act: Messrs. J. E. Austin, F. Hollyer, P. H. Newman, F. M. Sutcliffe, and J. B. B. Wellington.

Medals will be placed at their disposal for artistic, scientific, and technical excellence of photographs, for lantern transparencies, and for apparatus.

Negatives and transparencies, photo-mechanical prints, photographs of purely scientific interest, photographs coloured by scientific or mechanical means, and apparatus and appliances containing points of special interest will be admitted; but photographs coloured by hand will not be admitted.

Photographic lantern slides will be shown on the evenings the exhibition is open, by means of the society's optical lantern. The Exhibition Committee will be glad to receive slides for exhibition, especially such as are illustrative of life and scenery in the British Colonies and Possessions. No charge will be made for exhibiting such slides, which should be delivered at the offices of the society early in September, in order to enable the committee to group and arrange them. Slides, however, will not be eligible for a medal unless the conditions in the prospectus be observed.

Blank entry forms and any further information respecting the exhibition, apparatus and lantern slides can be obtained on application to the Assistant Secretary, P.S.G.B., 50, Great Russell-street, London, W.C.—I have the pleasure to be, your obedient servant,

H. A. LAWRANCE,
Assistant Secretary.

Photographic Society of Great Britain, 50, Great Russell-street, W.C., July 3, 1891.

## Notes and Queries.

*Fred. A. Robinson* writes: "I have a 3in. optical lantern, but am neither satisfied with the brilliancy nor size of the disc. Can you tell me if there is any other form of light that I can adopt without much more trouble or expense? It seems to me that oxy-hydrogen limelight is too expensive and troublesome for occasional exhibitions to a few friends in one's private house. Is there any other means of getting the desired result? *Answer.*—Doubtless the oxy-calcium or spirit jet would suit your requirements. You will find particulars of it in our issue for September, 1889.

*J. Knight, jun.*—Fix your star dissolver as follows: Secure it in place with the small bye-pass tubes standing vertical, so that the bye-pass taps are on the upper half. Connect the hydrogen supply with the horizontal tube from the left-hand side of star, then the two tubes standing at an angle of 45deg. on the left respectively to the hydrogen tube of jets in upper and lower lanterns. The oxygen supply is connected in similar manner with the horizontal tube, at right-hand, and the other tubes with oxygen side of jets in upper and lower lanterns. After you light up, adjust the bye-passes; a few minutes will suffice to enable you to understand the manner in which either or both lights may be turned up.

*R. W. Stiles.*—You do not state the focus of lens with which you want to make a 15ft. disc. If it is a 4in. focus, the distance between lantern and screen must be 20ft; if 5in., 25ft.; if 6in., 30ft.; if 7in., 35ft.; if 8in., 40ft.; and so on. See the table in our issue for last October.

*Murgen.*—Look for a leak of light in the camera.

*L. Park.*—The varnish pot may be new in this country, but it has been in use in America for the last ten years.

*M.*—All lenses of the same focus will project a disc of similar size at the same distance. The make or form of lens has nothing to do with this.

*L. Davidson.*—See reply to R. W. Stiles. The same rule applies, no matter what the distance may be; now in your case you want a 12ft. disc, with lantern 75ft. from screen. A lens of 18in. or 19in. focus.

*Ed. Beach.*—In some back numbers of the Journal you speak of tubes being filled with powdered pumice. Kindly tell me what this is. *Reply.*—Pumice is hardened lava thrown out by volcanoes.

*Cautious.*—Yes; the quantity of gas can be obtained by weighing the cylinder. Messrs. J. H. Steward, Strand, introduced a special kind of scales for this purpose.

*B. E.*—We cannot at the present give a list of the novelties to be introduced, but may perhaps in our next issue.

*Novice, B. B., and E. Hunter.*—Queries came too late for insertion in this number.

A POST-OFFICE ORDER has been received from Belgium, but without any letter of instruction.

:o:

EXPLOSION IN AFRICA.—We are informed by a correspondent in Africa of the following: It having been announced that the Rev. A. Vine Hall, of Claremont, would deliver an interesting lecture at Cape Town, on 23rd June, illustrated by the latest limelight views, an audience of between forty or fifty were assembled, when, at twenty minutes to eight, a loud explosion was heard. The explosion extinguished the gas in the hall, and caused considerable alarm, but fortunately no panic occurred. The explosion took place, it is conjectured, by the accidental contact of the oxygen and hydrogen gases, which shattered the limelight apparatus, destroyed all the slides, and scattered the occupants of the room in all directions. The explosion brought down most of the ceiling boards, and blew out some panes of glass. Firemen were promptly on the spot, but their services were not required. The damage is estimated at £50. It is needless to say that the lecture did not take place, but will be reserved for some more favourable opportunity.